Fig. 1

Fig. 2

Fig. 3

40

60

FLASH MEMORY

42

FLASH I/F SEQUENCER

51

61

OSC CONT.

RESET

PAGE BUFFER

45

WR.Reg.

ECC

RD.Reg.

ECC

COMMAND REG.

CONFIG ROM

50

NVM

DES

55

46

47

48

49

44

53

54

S/P&P/S I/F

43

41

52

GND

SBS

VCC

RESERV

DIO

INT

RESERV

SCK

VCC

GND

Fig. 4

APPLICATION PROCESS
FILE MANAGEMENT PROCESS
LOGICAL ADDRESS MANAGEMENT
PHYSICAL ADDRESS MANAGEMENT
FLASH MEMORY ACCESS

FILE SYSTEM PROCESS
HIERARCHY

Fig. 5

BOOT BLOCK

PAGE 0	HEADER AREA
PAGE 1	PROHIBITED BLOCK DATA AREA
PAGE 2	CIS/IDI

BOOT BLOCKS
- BLOCK 0
- BLOCK 1

USER BLOCKS
- BLOCK i
- BLOCK j
- BLOCK n

BOOT BLOCK (BACKUP)

INFORMATION BLOCK

USER BLOCK
- PAGE 0
- ⋮
- PAGE m

DATA (512 BYTES)	REDUNDANT PORTION (16 BYTES)

OVERWRITE FLAG		LOGICAL ADDRESS AREA	FORMAT RESERVE AREA	DISPERSION INFORMATION (ECC) AREA	DATA ECC AREA

MANAGEMENT FLAG AREA

UPDATE STATUS

PAGE STATUS

BLOCK STATUS

Fig. 6

PARTITION TABLE (512 BYTES)								
BLANK								

BOOT SECTOR (512 BYTES)   FAT

	1	2	3	4	5	6	7	8
1	0	0	0	0	6	7	8	FFF
2	0	11	12	100				
3	0							
				101	FFF			
					111	FFF		

COPY OF FAT

ROOT DIRECTORY

PBLIST.MSF	200
CAT.MSA	5
DOG.MSA	10
MAN.MSA	110

CLUSTER	2	empty
CLUSTER	3	
CLUSTER	4	
►CLUSTER	5	CAT (ATRAC3 Data)
CLUSTER	6	
CLUSTER	7	
CLUSTER	8	empty
CLUSTER	9	
►CLUSTER	10	DOG-1 (ATRAC3 Data)
CLUSTER	11	
CLUSTER	12	empty
CLUSTER	13	
⋮		DOG-2 (ATRAC3 Data)
►CLUSTER	100	
CLUSTER	101	
⋮		MAN (ATRAC3 Data)
►CLUSTER	110	
CLUSTER	111	
⋮		CAT.MSA
►CLUSTER	200	DOG.MSA
CLUSTER	201	MAN.MSA
⋮		

SUB DIRECTORY

DATA AREA

FAT PARTITION 2G byte MAX

Fig. 7

```
ROOT
  │
  ├─[+]─🗁 DCIM      ...STILL PICTURE DIRECTORY
  │
  ├─[+]─🗁 MOxxxnn   ...MOVING PICTURE DIRECTORY
  │
  ├─[+]─🗁 VOICE     ...VOICE DIRECTORY
  │
  ├────🗁 AVCTL      ...CONTROL DIRECTORY
  │
  └────🗁 HIFI       ...MUSIC DIRECTORY
         │
         ├─── PBLIST.MSF ...REPRODUCTION MANAGEMENT FILE
         │
         ├─── A3D00001 ...ATRAC3 MUSIC PROGRAM DATA FILE
         │
         │
         ├─── A3Dnnnnn ...ATRAC3 MUSIC PROGRAM DATA FILE
         │
         ├─── A3Dnnnnn+1 ...ATRAC3 MUSIC PROGRAM DATA FILE
         │
         ⋮
```

Fig. 8

REPRODUCTION
MANAGEMENT FILE

Header
NM1−S
NM2−S
TRKTBL
INF−S

16 K Byte

Fig. 9

ONE ATRACK3 MUSIC
PROGRAM DATA FILE

Header	
NM1	
NM2	ATTRIBUTE HEADER
TRKINF	
PRTINF	
INF	

16 K Byte

Header
ATRAC3DATA

16 K Byte

Header
ATRAC3DATA

16 K Byte

Fig. 10A

ATRAC3 FILE 1

| 0 | 1 | 2 | 3 | 4 |

ENLARGED VIEW OF 4-th CLUSTER

1 CLUSTER

1 PART

1-st MUSIC PROGRAM START

1-st MUSIC PROGRAM END

| SU | SU | SU | SU | SU | 4 |

PART END

1-st MUSIC PROGRAM END

ATRACK3 FILE 2

| 0 | 1 | 2 | 3 | 4 | 5 |

2-nd MUSIC PROGRAM START

2-nd MUSIC PROGRAM END

Fig. 10B

ATRACK3 FILE 1

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

PART 1 START   PART 1 END   PART 2 START   PART 2 END

1-st MUSIC PROGRAM START

1-st MUSIC PROGRAM END

Fig. 10C

ATRACK 3 FILE 1

| 0 | 1 | 2 | 3 | 4 |

1-st MUSIC PROGRAM START

1-st MUSIC PROGRAM END

ATRACK 3 FILE 2

| 0 | 3 | 4 |

2-nd MUSIC PROGRAM START

2-nd MUSIC PROGRAM END

Fig. 11

REPRODUCTION MANAGEMENT FILE (PBLIST)

Address	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0X0000	BLKID-TLO				Reserved		MCode		REVISION				Reserved			
0X0010	SN1C+L		SN2C+L		SINFSIZE		T-TRK		VerNo		Reserved					
0X0020	NM1-S(256)															
0X0120	NM2-S(512)															
0X0320	Reserved															
0X0330	Reserved								CONTENTSKEY							
									MAC							
													S-YMDhms			
0X0350	TRK-001		TRK-002		TRK-003		TRK-004		TRK-005		TRK-006		TRK-007		TRK-008	
	TRK-009		TRK-010		TRK-011		TRK-012		TRK-013		TRK-014		TRK-015		TRK-016	
0X0660	TRK-393		TRK-394		TRK-395		TRK-396		TRK-397		TRK-398		TRK-399		TRK-400	
0X0647	INF-S(14720)															
0X3FF0	BLKID-TLO				Reserved		MCode		REVISION				Reserved			

TRKTBL (0X0350 – 0X0647)

Fig. 12A

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0X0000	BLKID-TL0				Reserved		MCode		REVISION				Reserved			
0X0010	SN1C+L		SN2C+L		SINFSIZE		T-TRK		VerNo		Reserved					
0X0020	NM1-S(256)															
0X0120	NM2-S(512)															
0X0320	Reserved										CONTENTSKEY					
0X0330	Reserved										MAC					
											S-YMDhms					

Fig. 12B

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0X0350	TRK-001		TRK-002		TRK-003		TRK-004		TRK-005		TRK-006		TRK-007		TRK-008	
0X0360	TRK-009		TRK-010		TRK-011		TRK-012		TRK-013		TRK-014		TRK-015		TRK-016	
0X0660	TRK-393		TRK-394		TRK-395		TRK-396		TRK-397		TRK-398		TRK-399		TRK-400	
0X0670	INF-S(14720)															
0X3FF0	BLKID-TL0				Reserved		MCode		REVISION				Reserved			

Fig. 12C

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
	INF	0x00	1D	0x00	SIZE		MCode		C+L		Reserved		DATA VARIABLE LENGTH			

Fig. 13

ID	MUSIC INFORMATION (CHARACTERS)		ID	URL INFORMATION (WEB INFORMATION)	
			32	RESERVED	VARIABLE
0	RESERVED	VARIABLE	33	ALBUM	VARIABLE
1	ALBUM	VARIABLE	34	SUB TITLE	VARIABLE
2	SUBTITLE	VARIABLE	35	ARTIST	VARIABLE
3	ARTIST	VARIABLE	36	CONDUCTOR	VARIABLE
4	CONDUCTOR	VARIABLE	37	ORCHESTRA	VARIABLE
5	ORCHESTRA	VARIABLE	38	PRODUCER	VARIABLE
6	PRODUCER	VARIABLE	39	PUBLISHER	VARIABLE
7	PUBLISHER	VARIABLE	40	COMPOSER	VARIABLE
8	COMPOSER	VARIABLE	41	SONG WRITER	VARIABLE
9	SONG WRITER	VARIABLE	42	ARRANGER	VARIABLE
10	ARRANGER	VARIABLE	43	SPONSOR	VARIABLE
11	SPONSOR	VARIABLE	44	CM	VARIABLE
12	CM	VARIABLE	45	GUIDE	VARIABLE
13	GUIDE	VARIABLE	46	ORIGINAL MUSIC PROGRAM TITLE	VARIABLE
14	ORIGINAL MUSIC PROGRAM TITLE	VARIABLE	47	ORIGINAL ALBUM TITLE	VARIABLE
15	ORIGINAL ALBUM TITLE	VARIABLE	48	ORIGINAL MUSIC PROGRAM COMPOSER	VARIABLE
16	ORIGINAL MUSIC PROGRAM COMPOSER	VARIABLE	49	ORIGINAL MUSIC PROGRAM SONG WRITER	VARIABLE
17	ORIGINAL MUSIC PROGRAM SONG WRITER	VARIABLE	50	ORIGINAL MUSIC PROGRAM ARRANGER	VARIABLE
18	ORIGINAL MUSIC PROGRAM ARRANGER	VARIABLE	51	ORIGINAL MUSIC PROGRAM PERFORMER	VARIABLE
19	ORIGINAL MUSIC PROGRAM PERFORMER	VARIABLE	52		
20	MESSAGE	VARIABLE	53		
21	COMMENT	VARIABLE	54		
22	WARNING	VARIABLE	55		
23	GENRE	VARIABLE	56		
24			57		
25			58		
26			59		
27			60		
28			61		
29			62		
30			63		
31					

Fig. 14

ID	PATH/OTHERS	
64	RESERVED	
65	PATH TO VIDEO DATA	VARIABLE
66	PATH TO SONG DATA	VARIABLE
67	PATH TO MIDI DATA	VARIABLE
68	PATH TO GUIDE DATA	VARIABLE
69	PATH TO COMMENT DATA	VARIABLE
70	PATH TO CM DATA	VARIABLE
71	PATH TO FAX DATA	VARIABLE
72	PATH TO COMMUNICATION DATA 1	VARIABLE
73	PATH TO COMMUNICATION DATA 2	VARIABLE
74	PATH TO CONTROL DATA	VARIABLE
75		
76		
77		
78		
79		
80		
81		
82		
83		
84		
85		
86		
87		
88		
89		
90		
91		
92		
93		
94		
95		

ID	CONTROL/NUMERIC DATA INFORMATION	
96	RESERVED	8
97	ISRC	8
98	TOC_ID	7
99	UPC/JAN	4
100	RECORDED DATE (YMDhms)	4
101	RELEASED DATE	4
102	ORIGINAL MUSIC PROGRAM RELEASED DATE (YMDhms)	4
103	RECORDED DATE (YMDhms)	4
104	SUB TRACK	1
105	AVERAGE VOLUME LEVEL	4
106	RESUME	4
107	REPRODUCTION LOG (YMDhms)	1
108	NUMBER OF REPRODUCTION TIMES (FOR LEARNING)	16
109	PASSWORD 1	16
110	APPLevel	1
111	GENRE CODE	
112	MIDI DATA	
113	THUMB NAIL PHOTOGRAPH DATA	
114	TEXT MULTIPLEXED BROADCAST DATA	
115	NUMBER OF TOTAL MUSIC PROGRAMS	
116	SET NUMBER	
117	NUMBER OF TOTAL SETS	VARIABLE
118	REC POSITION INFORMATION – GPS	VARIABLE
119	PB POSITION INFORMATION – GPS	VARIABLE
120	REC POSITION INFORMATION – PHS	VARIABLE
121	PB POSITION INFORMATION – PHS	VARIABLE
122	CONNECTION DESTINATION TELEPHONE NUMBER 1	VARIABLE
123	CONNECTION DESTINATION TELEPHONE NUMBER 2	VARIABLE
124	INPUT VALUE	VARIABLE
125	OUTPUT VALUE	VARIABLE
126	PB CONTROL DATA	VARIABLE
127	REC CONTROL DATA	VARIABLE

Fig. 15

ID	SYNCHRONOUS REPRODUCTION INFORMATION	
128	RESERVED	
129	SYNCHRONOUS REPRODUCTION INFORMATION 1	VARIABLE
130	SYNCHRONOUS REPRODUCTION INFORMATION 2	VARIABLE
131	SYNCHRONOUS REPRODUCTION INFORMATION 3	VARIABLE
132	SYNCHRONOUS REPRODUCTION INFORMATION 4	VARIABLE
133	SYNCHRONOUS REPRODUCTION INFORMATION 5	VARIABLE
134	SYNCHRONOUS REPRODUCTION INFORMATION 6	VARIABLE
135		
136		
137		
138	EMD INFORMATION 1	VARIABLE
139	EMD INFORMATION 2	VARIABLE
140		
141		
142		
143		
144		
145		
146		
147		
148		
149		
150		
151		
152		
153		
154		
155		
156		
157		
158		
159		

Fig. 16A

0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
IN	0x00	ID	0x00	SIZE		Mcode		C+L		Reseved		VARIABLE LENGTH DATA			

Fig. 16B

ID		ARTIST	SIZE		ASCII ENGLISH				DATA			
0x69	0x00	3	0x00	0x1C(28)	Mcode	0x01	0x09	0x00	0x00	S	I	M	O
N	&	G	R	A	F	U	N	K	E	L	0x00		

Fig. 16C

							ID		ISRC	
							0x69	0x00	97	0x00

SIZE		BINARY NOT SET				ISRC Code 8byte	
0x14(20)	Mcode	0x00	0x00	0x00	0x00	DATA	

Fig. 16D

RECORDED DATE				SIZE		BINARY NOT SET				DATA YMD hms	
0x69	0x00	103	0x00	0x10(16)	Mcode	0x00	0x00	0x00	0x00	745	565

Y	M	D	h	m	s
31,30,29					3,2,1,0bit

Fig. 16E

REPRODUCTION LOG				SIZE		BINARY NOT SET				DATA YMD hms	
0x69	0x00	107	0x00	0x10(16)	Mcode	0x00	0x00	0x00	0x00	745	565

Y	M	D	h	m	s
31,30,29					3,2,1,0bit

Fig. 17

A3Dnnnnn.MSA(ATRAC3 DATA FILE)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
														BLOCK	SERIAL	
					Reserved		MCode			Reseved			INX		XT	
0x0000	BLKID-HD0								T-SU							
0x0010	N1C+L		N2C+L		INFSIZE		T-PRT									
0x0020	NM1(256)															
0x0120	NM2(512)															
									CONTENTSKEY							
					Reserved(8)				MAC							
0x0310													A	LT	FNo	
0x0320	Reserved(8)															
	Reserved(12)															
	MG(D)SERIAL-nnn												MT	CT	CC	CN
	CONNUM		YMDhms-S				YMDhms-E				Reserved(8)					
0x0360					PRTKEY								PRTKEY			
0x0370	PRTSIZE			CONNUM0			PRTSIZE(0x0388)				CONNUM0					
0x0380					Reserved(8)											
0x0390	INF(0x0400)															
													BLOCK	SERIAL		
					Reserved		MCode			Reseved			BLOCK	SERIAL		
0x3FFF	BLKID-HD0								CONNUM0							
0x4000	BLKID-A3D				Reserved		MCode		INITILIZATION VECTOR							
0x4010	BLOCK SEED															
0x4020	SU-000(Nbyte=384byte)															
0x41A0	SU-001(Nbyte)															
0x4320	SU-002(Nbyte)															
0x04A0	SU-041(Nbyte)															
0x7DA0	Reserved(Nbyte=208byte)															
					BLOCK SEED					CONNUM0			BLOCK	SERIAL		
0x7F20																
0x7FF0	BLKID-A3D				Reserved		MCode									

Fig. 18

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
													BLOCK SERIAL			
					Reserved		MCode				Reseved		INX		XT	
0x0000	BLKID-HD0								T-SU							
0x0010	N1C+L		N2C+L		INFSIZE		T-PRT									
0x0020	NM1(256)															
0x0120	NM2(512)															
0x0310																

Fig. 19

				CONTENTSKEY			
	Reserved(8)			MAC			
0x0320	Reserved(8)				A	LT	FNo
	Reserved(12)						
	MG(D)SERIAL-nnn			MT	CT	CC	CN
0x0360	CONNUM	YMDhms-S	YMDhms-E				

Fig. 20

bit7:MODE OF ATRAC3　　0:Dual　　1:Joint

bit6,5,4　N OF 3 BITS:MODE VALUE

N	MODE	TIME	TRANSMISSION RATE	SU	BYTES
7	HQ	47min	176kbps	31SU	512
6		58min	146kbps	38SU	424
5	EX	64min	132kbps	42SU	384
4	SP	81min	105kbps	53SU	304
3		90min	94kbps	59SU	272
2	LP	128min	66kbps	84SU	192
1	mono	181min	47kbps	119SU	136
0	mono	258min	33kbps	169SU	96

bit3:Reserved

bit2:DATA TYPE　　0:AUDIO　　　　1:OTHER

bit1:REPRODUCTION SKIP　　0:NORMAL REP　1:SKIP

bit0:EMPHASIS　　0:OFF　　　　1:ON(50/15 μS)

Fig. 21

bit7 :COPY PERMISSION   0:COPY PROHIBITION   1:COPY PERMISSION
bit6 :GENERATION   0:ORIGINAL   1:FIRST OR LATER COPY GENERATION
HCMS bit5-4 :COPY CONTROL FOR HIGH SPEED DIGITAL COPY
　　　00:COPY PROHIBITION   01:COPY FIRST GENERATION 10:COPY PERMISSION
　　　COPY OPERATION OF CHILD OF FIRST COPY GENERATION IS PROHIBITED.

bit3-2 MagicGate AUTHENTICATION LEVEL
　　　00:Level10(Non-MG)   01:Level1
　　　10:Level2   11:Reserved
　　　DIVIDE AND COMBINE ARE PROHIBITED IN OTHER THAN LEVEL 10.

bit1,0   Reserved

Fig. 22

		PRTKEY		Reserved(8)
				PRTKEY
0x0370	PRTSIZE	CONNUM0	PRTSIZE(0x0388)	CONNUM0
0x0380			Reserved(8)	
0x0390				

Fig. 23

				CONNUM0	BLOCK SERIAL
	BLKID-A3D	Reserved	MCode	INITILIZATION VECTOR	
0x4000	BLOCK SEED				
0x4010					
0x4020	SU-000(Nbyte=384byte)				

Fig. 24A

Fig. 24
Fig. 24A
Fig. 24B
Fig. 24C

```
                        ( PROCESS )
                            │
                            ▼
                  NO   ◇ BLKID-TL0? ◇ ─── SP1
         ┌──────────────/            \
         │            /                \
         │                  │ YES
         │                  ▼
 SP2 ┌───┴──────┐    ┌──────────────┐ ─── SP4
     │  BLOCK   │    │  SEARCHED    │
     │INCREMENT │    │ BLOCK IS PBLIST│
     └───┬──────┘    └──────┬───────┘
         │ SP3              │
         ▼                  ▼
   ◇  BLOCK  ◇       ┌──────────────┐
NO │  END?   │       │ ALL TRK→N    │ ─── SP5
   \         /       │ CORRESPONDING│
    \       /        │  TO T-TRK IN │
       │ YES         │   PBLIST     │
       ▼             └──────┬───────┘
   ( ERROR )                │
                            ▼
                     ┌──────────────┐
              SP6 ───│ SUCCESSIVELY │
                     │ SEARCH TRK-XX│
                     │  FROM PBLIST │
                     └──────┬───────┘
                            │
                            ▼
                     ┌──────────────┐
                     │  GENERATE    │
                     │ TRK-XX VS.   │
              SP7 ───│  FNO TABLE IN│
                     │   MEMORY     │
                     └──────┬───────┘
                            │
                            ▼
                     ┌──────────────┐
              SP8 ───│   N←N-1      │
                     └──────┬───────┘
                            │
                            ▼
                     ◇           ◇   NO
              SP9 ───◇   N = 0?   ◇──────┐
                     \           /
                         │ YES
                         ▼
```

19/32

Fig. 24B

RETURN TO TOP OF BLOCK — SP10

BLKID-HD0? — SP11

NO → SP12 BLOCK INCREMENT

SP13 BLOCK END?

NO

YES

YES → SEARCHED BLOCK IS ATTRIBUTE FILE — SP14

TABULATE FNO, CONNUM0, AND BLOCK SERIAL CORRESPONDING TO BLOCK NUMBER AND STORE TABLE IN MEMORY — SP15

Fig. 24C

RETURN TO BEGINNING OF BLOCK — SP16

BLKID-A3D? — SP17

NO

SP18

BLOCK INCREMENT

SP18'

BLOCK END?

NO

YES

SP21

OBTAIN CONNECTION STATE CORRESPONDING TO EACH TABLE STORED IN MEMORY

END

YES

SEARCHED BLOCK IS ATRAC3 FILE — SP19

CORRELATE BLOCK NUMBER, CONNUM0, AND BLOCK SERIAL AND STORE RESULTS IN MEMORY — SP20

Fig. 25

```
ROOT
  ├─☐DCIM        ...STILL PICTURE DIRECTORY
  ├─☐M0xxxxnn    ...MOVING PICTURE DIRECTORY
  ├─☐VOICE       ...VOICE DIRECTORY
  │
  ├─☐AVCTL       ...CONTROL DIRECTORY
  │
  └─☐HIFI        ...MUSIC DIRECTORY
       │
       ├─TRKLIST.MSF     ...TRACK INFORMATION MANAGEMENT FILE
       │                    CONTAINS POINTERS TO INFORMATION FILES
       │                    FOR TRACK PARTS, NAMES, AND CONTENT KEYS
       │
       │       NAME1     ...STICK NAME AND  PROGRAM NAME BLOCK (FOR ONE BYTE CODE)
       │                    PROGRAM NAME DATA CORRESPONDING TO
       │                    ASCII/8859-1 CODE
       │
       │       NAME2     ...STICK NAME AND PROGRAM NAME BLOCK (FOR TWO BYTE CODE)
       │                    PROGRAM NAME DATA CORRESPONDING TO MS-JIS,
       │                    HANKUL, CHINESE CODE, etc.
       │
       ├─TRAKLISTB.MSF   ...BACKUP TRACK INFORMATION MANAGEMENT FILE
       │                    FULL COPY OF TRKLIST.MSF
       │
       ├─INFLIST.MSF     ...CONTAINS VARIOUS TYPES OF ADDITIONAL INFORMATION
       │                    SUCH AS ARTIST NAME,ISRC CODE, TIME STAMP, STILL
       │                    PICTURE DATA, etc.
       │
       ├─A3Dnnnn.MSA     ... ATRAC3 PROGRAM DATA FILE
       │     ≀
       └─A3Dnnnn.MSA
```

Fig. 26

A3Dnnnnn.MSA

TRKLIST.MSF

0   F

0x0000

0x4000

0x8000

NAME
1

0xC000

NAME
2

INFLIST.MSF

Fig. 27

TRACK INFORMATION MANAGEMENT FILE
(TRKLIST.MSF)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
										REVISION			YMD h ms			
0x0000	BLK ID-TL0				T-TRK		MCode						S_YMD h ms			
0x0010	N1	N2	MSID		S-TRK		PASS		APP		INF-S					
0x0020	TRKINF-001															
	PRTINF-001															
	TRKINF-002															
	PRTINF-002															
	〜															
	BLK ID-TL0			MCode		REVISION										
0x3FF0	BLK ID-TL1			MCode		REVISION										
0x4000	〜															

DETAIL OF TRKINF-nnn/PRTINF-nnn

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
T0	LT	INF		FNM-nnn					CONTENTS KEY-nnn							
		-nnn		MG(D) SERIAL-nnn												
APP_CTL				CONNUM-nnn				P-nnn		XT				INX-nnn		
								MT	CT	CC	CN	Reserved			
YMDhms-S				YMDhms-E						PRTKEY-0000						
PR		A-0000		PRTSIZE-0000												
				〜						PRTKEY-nnnn						
PR		A-nnnn		PRTSIZE-nnnn												
						MCode		REVISION							
0x7FF0	BLK ID-TL1			MCode		REVISION										

Fig. 28

STICK NAME AND PROGRAM NAME BLOCK-FOR ONE BYTE CODE

	0	1	2	3	4	5	6	7
								MCode
0x8000	BLK ID-NM1				PNM1-001			
0x8008	PNM1-S				PNM1-003			
0x8010	PNM1-002							
					⌇			
0x8668	PNM1-408			NM1-S				
	NM1-001							
	NM1-002							
	NM1-003							
	⌇							
	NM1-408							
0xBFF0								MCode
0xBFF8	BLK ID-NM1							

Fig. 29

STICK NAME AND PROGRAM NAME BLOCK-FOR TWO-BYTE CODE

	0	1	2	3	4	5	6	7
								MCode
0xC000	BLK ID-NM2				PNM2-001			
0xC008	PNM2-S				PNM2-003			
0xC010	PNM2-002							
					⌇			
0xC668	PNM2-408			NM2-S				
	NM2-001							
	NM2-002							
	NM2-003							
	⌇							
	NM2-408							
0xFFF0								MCode
0xFFF8	BLK ID-NM2							

Fig. 30

ATRAC3 DATA FILE (A3Dnnnnn.MSA) ··· 1 SoundUnit=N BYTES

	0	1	2	3	4	5	6	7
								MCode
0x0000	BLK ID−A3D							
0x0008	BLOCK SEED							
	CONNUM0				BLOCK SERIAL			
0x0010	INITILIZATION VECTOR							
0x0018								
0x0020	SU-000 (N byte)							
	SU-001 (N byte)							
0x0020 +N/8	SU-002 (N byte)							
	∫							
	SU-(nnn-1) (N byte)							
0x3FF0 −N/8	Reserved (M byte)							
	BLOCK SEED							
0x3FF0								MCode
0x3FF8	BLK ID−A3D							

Fig. 31

ADDITIONAL INFORMATION MANAGEMENT FILE (INFLIST.MSF)

	0 1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0x0000	BLK ID-INF			T-DAT		MCode		YMDhms				INF-409			
												INF-004			
0x0010	INF-001			INF-002				INF-003				INF-008			
0x0020	INF-005			INF-006				INF-007							
	⸏			⸏				⸏				⸏			
0x0660	INF-405			INF-406				INF-407				INF-408			
	Reserved														
0x07F0	DataSlot-0000														
0x0800	DataSlot-0001														
0x0810															
	⸏														
	DataSlot-03 7F(895dec)														
0x3FF0	DataSlot-03 8 0														
0x4000															
	⸏														
	DataSlot-FFFF (MAXIMUM VALUE)														

Fig. 32

ADDITIONAL INFORMATION DATA STRUCTURE

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
	IN	ID	SID	00	SIZE		MCode									
	VARIABLE LENGTH DATA															

Fig. 33

101

SEARCH AND COLLECT
TRACK MANAGEMENT FILE

OBTAIN NUMBER OF TOTAL
TRACKS AND NUMBER OF
PARTS FOR EACH TRACK

OBTAIN TRKLIST

OBTAIN TRKINF

OBTAIN PRTINF

COLLECT NAME1

COLLECT NAME2

102

SEARCH VOICE DATA FILE

COLLECT A3D001 DATA

COLLECT A3D002 DATA

. . . . .

COLLECT A3D00m DATA

INSIDE OF
RECOVERY HDD

103

REINITIALIZE MS

COPY TRACK
MANAGEMENT FILE
AND AUDIO DATA
FILES OF ALL
TRACKS FROM HDD
TO MS

RECOVERING MS

Fig. 34

Fig. 35

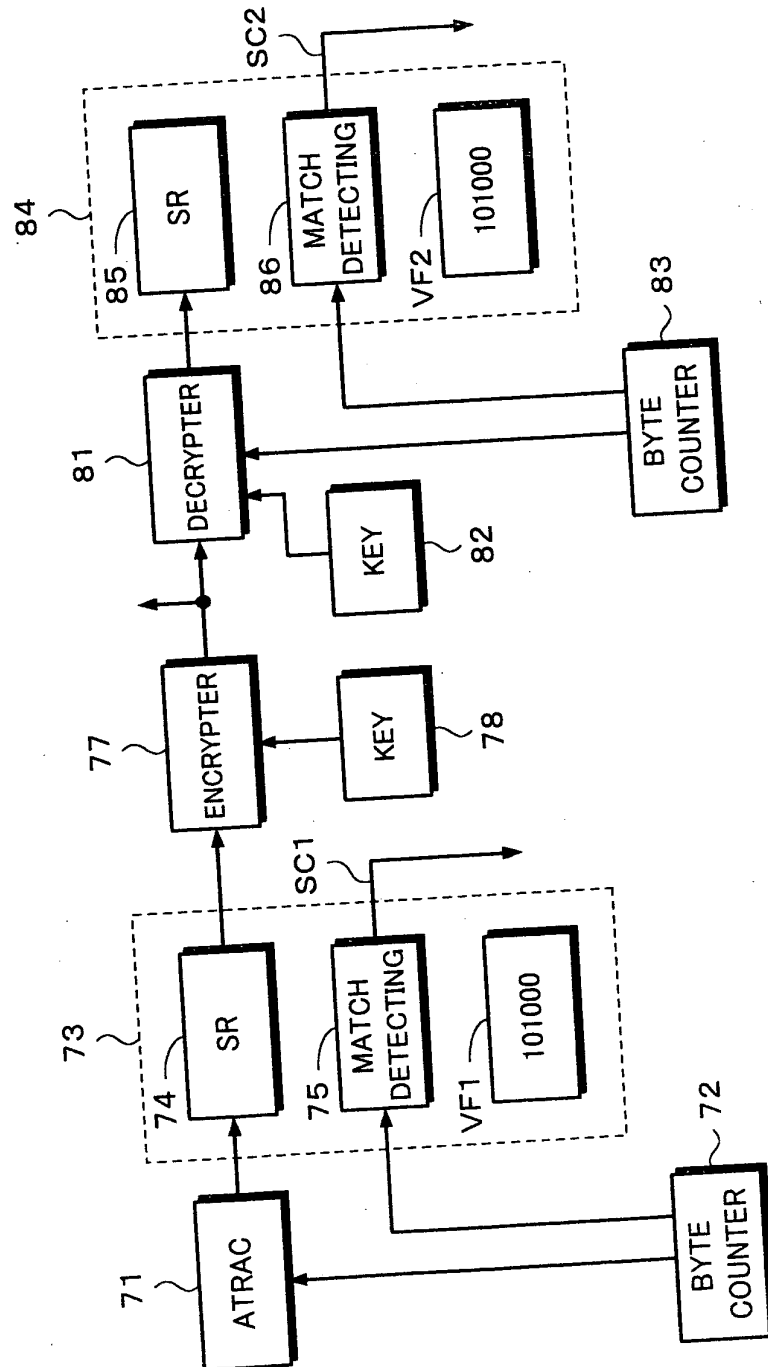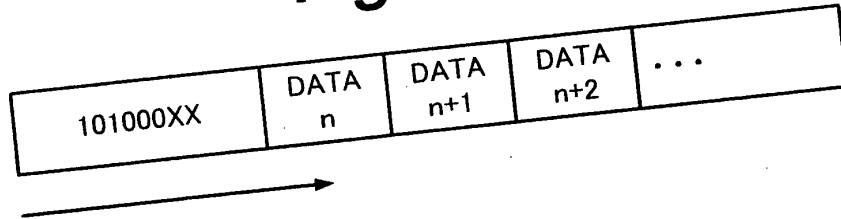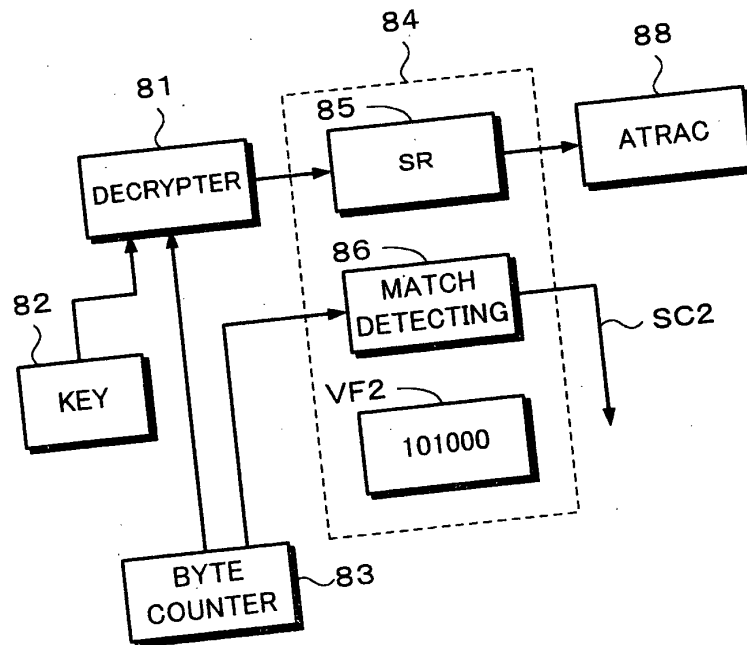| 101000XX	DATA n	DATA n+1	DATA n+2	. . .

Fig. 36

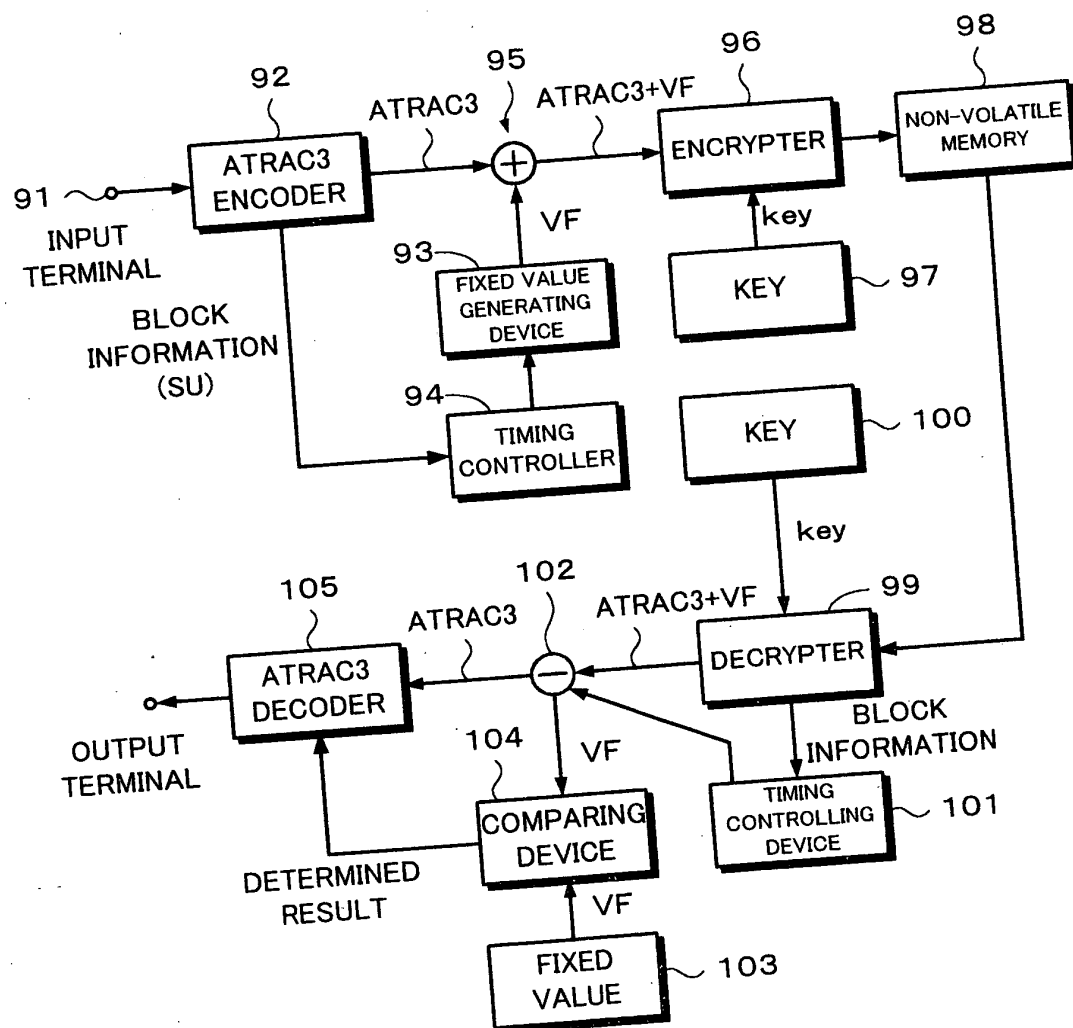# Fig. 37

10   AUDIO ENCODER/DECODER IC
20   SECURITY IC
30   DSP
40   MEMORY CARD
42   FLASH MEMORY
52   SECURITY BLOCK
PBLIST REPRODUCTION MANAGEMENT FILE
TRKLIST TRACK INFORMATION MANAGEMENT FILE
INFLIST ADDITIONAL INFORMATION MANAGEMENT FILE
A3Dnnn AUDIO DATA FILE